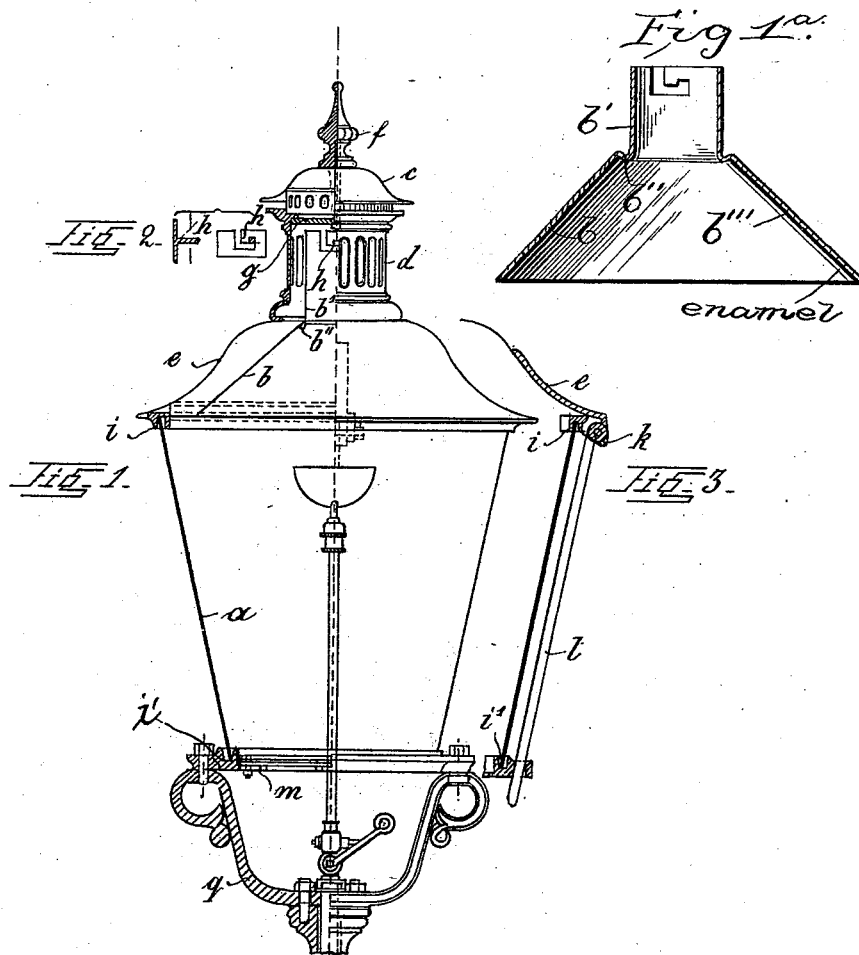


(No Model.)

W. RITTER.  
STREET LAMP.

No. 526,870.

Patented Oct. 2, 1894.



Witnesses:  
F. L. Middleton  
James M. H. H.

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# UNITED STATES PATENT OFFICE.

WILHELM RITTER, OF COLOGNE, GERMANY.

## STREET-LAMP.

SPECIFICATION forming part of Letters Patent No. 526,870, dated October 2, 1894.

Application filed August 1, 1893. Serial No. 482,110. (No model.) Patented in Germany January 7, 1890, No. 55,003; in Belgium January 10, 1890, No. 89,132; in England January 22, 1890, No. 1,188; in France January 27, 1890, No. 203,371; in Austria-Hungary October 11, 1890, No. 2,857 and No. 19,788, and in Switzerland November 12, 1890, No. 3,131.

### *To all whom it may concern:*

Be it known that I, WILHELM RITTER, a subject of the German Emperor, residing at Cologne, in the Kingdom of Prussia and Empire of Germany, have invented certain new and useful Improvements in Street-Lamps, (for which I have obtained Letters Patent in France, No. 203,371, dated January 27, 1890; in Germany, No. 55,003, dated January 7, 1890; in Great Britain, No. 1,188, dated January 22, 1890; in Belgium, No. 89,132, dated January 10, 1890; in Austria-Hungary, No. 2,857 and No. 19,788, dated October 11, 1890, and in Switzerland, No. 3,131, dated November 12, 1890,) of which the following is a specification.

This invention relates to the means for lighting streets and other places by gas or other luminant agents and has for its purpose to obviate the principal drawbacks inherent to the lamps or lanterns hitherto generally employed for the said purpose, which owing to their construction and the material used therein require frequent and expensive repairs, particularly involving considerable expenditure through breakage of glass and give on the whole unsatisfactory luminant results when compared to the "intensive lanterns."

In the drawings, Figure 1, is an elevation of the lamp partly in section, and Fig. 1<sup>a</sup> is a detail in section of the reflector. Fig. 2, is a detail view of the bayonet joint for suspending the reflector. Fig. 3, is a detail sectional view showing the safety bar for holding the top of the lantern up in case the transparent body portion is shattered.

The transparent body portion *a* of the lamp is made of one piece of thick glass. This is seated in grooves in the upper and lower rings *i i'*. All the metallic parts are preferably made of zinc, cast, or sheet iron, this being the most suitable for the purpose. The upper ring *i* has the top *e* connected therewith preferably by a hinge joint *k*, Fig. 3 and this top is surmounted by a dome *d* slotted as shown for the admission of air and above this dome is the crown *c* secured thereto by a screw *f* passing down into a cross bar *g* of the dome *d*. This crown has perforations for the escape of the hot air which rises through the bell shaped reflector made up of the two

sections *b b'* suspended within the dome by a bayonet joint *h* the pins therefor being on the dome to engage the slots in the upper edge of the cylindrical part *b'*. The part *b* flares outwardly from the lower edge of the part *b'* and there is a space left between the parts *b b'* and the cap *e* and dome *d* respectively for the downward movement of the cold air entering through the slots of the dome *d*, it being understood that the hot air rises through the reflector and passes out through the perforated crown. The reflector *b* is enam-eled at *b'''* Fig. 1<sup>a</sup> to secure the luminous effect. By this arrangement the required quantity of air is fed to the flame and said flame is maintained storm proof and steady and further the cold air admitted into the dome must pass down the outside of the bell shaped reflector and thus become heated prior to its contact with the flame thus supporting the highest degree of combustion and increasing the luminous power.

It will be noticed that the reflector is formed with a groove at *b''* and this serves to catch any rain water which may beat in the dome and strike against the cylindrical part *b'* and thus hold the same until it is vaporized by the heat of the flame.

It will be noticed that by using a transparent body *a* of one piece I dispense with all frame work between the upper and lower rings but in order to prevent the fall to the ground of the dome and upper portion of the lamp in case the glass *a* should be broken I use the single safety rod *l*. This rod engages the lower rim *i'* and thus holds the upper parts from falling completely. They may however fall slightly, the cap turning on the hinge *k* until it strikes the jet tube.

The glass body *a* is secured by means of gypsum or other substance in the upper and lower rings *i i'* and this binding agent when dried is coated with linseed oil, varnish or equivalent material.

The bottom of the lamp may be closed by any suitable glass *m*. The support for the lamp is shown at *q*—.

I claim—

1. In combination, in a lamp, the body portion, the cap *e*, the perforated dome on top

thereof and the perforated crown above the dome and the reflector comprising the cylindrical part *b'* within the dome and the flaring part *b* within the cap, said parts *b b'* being arranged with a space about them for the circulation of cold air entering through the perforated dome and having their interior communicating with the perforated crown, for the escape of hot air said annular space about the flaring part *b* communicating with the interior of said flaring part around the lower edge thereof, substantially as described.

2. In combination, the lamp body and the reflector in the top thereof composed of a cylindrical part *b'* and the flaring part *b*, said parts having the groove or channel *b''* between them, substantially as described. 15

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

WILHELM RITTER.

Witnesses:

SIBILLA LANG,

H. A. MAXWELL.